

Wiggins, G. and McTighe, J. (2011). *The Understanding by Design guide to creating high-quality units*. ASCD: Alexandria, VA.

^{Enduring} Framing Understandings

Understandings are the specific insights, inferences, or conclusions about the big idea you want your students to leave with. The more enduring the understanding, the more central it should be to unit design. As we noted in Module E, you may find it helpful to think of an understanding as the moral of the story, or rather, of your unit. In UbD, understandings

- Are *full-sentence statements* reflecting conclusions about the content via big ideas—the particulars of what you want students to understand about that idea. For example, "I want learners to understand that a written constitution and encoded rule of law are essential to safeguard the people's rights in a democracy."
- Can be gained only through *guided inference* whereby the learner is helped to make, recognize, or verify a conclusion. They are thus not "teachable" facts. Understandings are inherently abstract, usually not obvious, sometimes counterintuitive, and possibly misunderstood by students, so simply "teaching" the understanding does not guarantee that students will "get" it.

Beginners with UbD often end up mistakenly listing the topic when asked to identify understandings (e.g., "I want students to understand the Civil War") instead of stating what conclusions they want learners to derive or grasp from a study of the war. Thus, as a practical technique, we ask you to use the word *that* in the template—"I want my students to understand that...." So, in our Civil War example, the revised answer would be "I want my students to understand that the war was fought over issues of economic history and states' rights; the morality of slavery was not the sole cause of the war's beginning."



Design Tip: When you get stuck trying to think of how to turn your content standards and objectives into understandings, try these two prompts:

- Those are the facts they must learn, but what do the facts mean?
- If the content of the unit is the story, then what is the moral of the story (in this case, of the unit)?

Here we list some examples of important meanings in various subject areas. Notice that they are stated as full-sentence generalizations that specify the desired understandings.

Algebra: The aim in algebraic problem solving is to turn unclear relationships of unknowns and unfamiliar into knowns and familiars by means of equivalent statements.

Arithmetic: Different number systems (e.g., bases) and expressions (e.g., fractions) can represent the same quantities. The goal, context, and ease of use determine the best choice.

Art: Great artists often break with established traditions, conventions, and techniques to better express what they see and feel. A confident free society willingly tolerates the turmoil that unorthodox art may cause.

Economics: In a free-market economy, price is a function of supply and demand.

Geography: The topography, climate, and natural resources of a region influence the culture, economy, and lifestyle of its inhabitants ("Geography is destiny").

Literature and Reading: An effective story engages the reader by leaving out key facts and raising questions—tensions, mystery, dilemmas, or uncertainty—about what will happen next.

Mathematics: The needed approach and precision vary by situation. Mathematical models have the power to illuminate complex phenomena—but also the possibility of distorting their meaning.

Music: Popular music has shifted from emphasizing melody to emphasizing multilayered rhythms ("It don't mean a thing if it ain't got that swing").

Physical Education: Unpredictable movement—in pace and direction—is key to good offense. Creating "space" away from the ball is just one way to increase scoring opportunities (in soccer, football, field hockey, basketball, and other sports).

Science: Correlation does not mean or ensure causality.

World Language: Translation rarely involves a one-to-one correspondence of words. Many words and expressions are idiomatic. Just because you can translate each word doesn't mean you will understand the speaker.

Writing: Self-deprecating humor can be an effective (and ironic) way to persuade audiences.

As with essential questions, some understandings are more encompassing than others. Sometimes the inferences we want students to draw are closely tied to unit content. At other times, we want them to make and see the power of broad generalizations.



Design Tip: If you get stuck trying to think of understandings that you want students to attain, think about the opposite—that is, overcoming the misunderstandings that are predictable or typical. Sometimes it is easier to think of specific misunderstandings that students have rather than the understandings you want them to achieve.

Understandings Versus Truisms

So, you have come up with a full-sentence generalization related to your unit topic. Unfortunately, that doesn't guarantee that you have identified a genuine understanding worth learning. Just as some essential questions are really too "teacherly," it is common for novice designers to identify vague notions, truisms, or facts they want learned instead of understandings. What do we mean by vague notion or truism? Look at these examples:

- History is about the rise and fall of peoples and cultures over time.
- Things fall or move in predictable ways.
- Math involves patterns.
- Good readers read nonfiction carefully.

Do you see what these examples all have in common? They are either so vague or obvious as to be unhelpful for designing units or helping students learn. In one sense, there is no "understanding" to arrive at: Most students already know these things. Rather, the aim in framing understandings is to identify the hard-won insights that can come only from digging into the content and drawing important conclusions from it. Here, then, are the same truisms rewritten to suggest what a genuine understanding is:

- History is always written by the winners, making it difficult to understand the "real" story of all peoples and cultures.
- $F = ma$
- Seemingly random data often reflect elegant functional relationships.
- Good readers approach a nonfiction text with just the right mix of respect for the author's argument and skepticism about its truth.

Note that the teacher has a much clearer direction for what to stress and teach in each unit based on these edits. And note, too, this paradox: *Understandings eventually become "facts" in our minds; many things we call "facts" are actually now-familiar understandings.*

If you teach very young or inexperienced students, you may have quarreled with our calling the first set of statements obvious. "None of those four original

ideas is obvious to a 5-year-old! They are only obvious to teenagers and older students!" You may well be correct. This is what makes teaching for understanding so much more challenging than teaching for content acquisition. A person either has the knowledge and skill or he doesn't. But understanding takes place along a developmental continuum over time, once hard-won insights become familiar, working knowledge.

On the other hand, we would still claim that those "understandings" are too vague for students—especially younger students. "Good readers read carefully"—what does that really mean? What should one do to be a more careful reader? The teacher could say this over and over, and it would not provide young readers with any insight into how to be more careful. The best understandings are written to help teachers and students know the specific insights the unit is meant to achieve. By definition, students don't start out understanding the understanding! They may not even know what the understanding means when they actually hear it or read it. That's the point of the unit: to help the student come to understand it.

Understandings and Skill

As we noted with essential questions, it is a misconception to think that there are no big ideas in skill-focused teaching. In subjects such as reading, writing, mathematics, world languages, vocational courses, physical education, and others that emphasize skill development, the understandings can be typically found in the strategies, rationale, or value of the skills. For example, here's a skill-based understanding for sports skills (e.g., throwing a baseball or football, swinging a golf club, throwing darts, etc.): "When you 'follow through' (in your throw or stroke), you will generate greater power and control." Such an understanding enables students to practice the skill (being mindful of following through) while monitoring its effects. Just as coaches and teachers encourage such "mindful" practice in athletics, teachers can similarly cultivate skill-based understandings in academic areas.



Design Tip: In skill areas the understandings most often reflect the *rationale* for a strategy and thus generalize about best practice. Take a strategy—for example, "Keep your eye on the ball"—and provide the rationale for it: "Most athletes lose eye contact when they swing. You need to keep your eye on the ball by taking deliberate action to be looking at it all through your swing."

Still puzzled over understandings? Figure F.4 is another exercise that should help you.



Design Task: Examine the understandings for your unit in light of the previous discussion and design tips. How might your understandings be edited to best summarize the important inferences that you want students to make and the insights you hope they will attain?

Figure F.4

Framing Understandings

Part 1: Examine the following examples (1–5) and nonexamples (6–10) to determine the common characteristics of an effectively framed understanding. List these below.

Enduring Understandings	Not Enduring Understandings
<p>The student will understand that...</p> <ol style="list-style-type: none"> 1. In a free-market economy, price is a function of supply and demand. 2. True friendship is revealed during difficult times, not happy times. 3. Statistical analysis and data display often reveal patterns that may not be obvious. 4. The most efficient and effective stroke mechanics in swimming involve pushing the maximum amount of water directly backward. 5. Heating of the Earth's surface and atmosphere by the sun drives convection within the atmosphere and oceans, producing winds and ocean currents. 	<p>The student will understand...</p> <ol style="list-style-type: none"> 6. That the price of long-distance phone calls has declined during the past decade. 7. True friendship. 8. Mean, median, and mode are measures of central tendency. 9. That they should not cup their hands when swimming the freestyle. 10. Wind is a force of nature.
<p>Common characteristics of enduring understandings:</p>	

Part 2: Use your list of characteristics as criteria to determine which of the following examples are effectively framed as enduring understandings. Mark yes if it is an enduring understanding or no if it's not.

	YES	NO
11. The concept of estivation.	_____	_____
12. The USDA Food Pyramid presents relative, not absolute, guidelines for a balanced diet.	_____	_____
13. Mathematical models simplify reality to enable useful solutions.	_____	_____
14. How to tell time.	_____	_____
15. The causes and effects of the Civil War.	_____	_____
16. That the Magna Carta was signed on June 15, 1215.	_____	_____

Part 3: Review the answer key and explanations; revise your description of enduring understandings.

16. No—States a fact, not an idea.
 15. No—States the topic, not the unobvious understandings about the causes and effects to be achieved.
 14. No—Skill objective does not state understandings about telling time that need to be grasped.
 13. Yes—This is a transferable idea, applicable throughout school and life. And it is not obvious that insightful models greatly simplify reality at some potential cost, despite their power.
 12. Yes—The word 'relative' in this statement signals that there is not a single prescribed or pat formula for healthy eating, given individual and cultural differences.
 11. No—States the concept to be learned, not the understanding about the concept that should be learned.

Refined common characteristics of enduring understandings: